

**BEUMAN (PRANOBANDHU) A SOCIAL HELPING PLATFORM**

**BY**

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This report presented the use of our social platform BEUMAN (PranoBandhu) and how it helps to reduce poverty by engaging others in helping.

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## APPROVAL

This Project titled “**BEUMAN (PRANOBANDHU) A SOCIAL HELPING PLATFORM**”, submitted by **Md. Fakhrul Alam Siddiquei Antor** and **Md. Rayhan Chowdhury** and **Lutfullahil Majid** to the Department of Computer Science and Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 8<sup>th</sup> July, 2020.

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## DECLARATION

We hereby declare that, this project has been done by us under the supervision of **Prof. Dr. Syed Akhter Hossain, Professor and head, Department of CSE** Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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## **ABSTRACT**

The world is like a bird's nest. Where every creation is hungry for something which they do not know will get or not. Some of them can get the desired thing from someone not. This planet is also too small so that anyone can reach anyone with just a click on the World Wide Web. But still, some people cannot reach and stay needy and frustrated for food, basic needs like the bird's child in the nest. But why? Why are they so disconnected and hungry? Cannot we help them? Cannot we make something which will remove the distance among us clearing the discrimination and problems? Is it hard to help? All these questions will be answered through this solution and hopefully, a solution will be discussed and implemented here. Nothing will be theoretical but practical because we human trust in doing rather than imagining. As an example, your five inches diagonal one-inch brick called smartphone which can do anything if not everything. We just did not think how we could improve that invention but we did make it smartest as much possible beyond our imagination. So using this technology can make solving problems easier because it is the most accessible technology by people.

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# CHAPTER 1

## INTRODUCTION

### **Introduction**

In our world, 7.53 billion people are living [1]. But unfortunately, not all of them are living but to be exact struggling so hard to be alive. It is not the fault of poor people nor wealthy peoples. Let's talk about some real stats. About 736 million people live below the extreme poverty line which is approximately one-tenth of the total population of this world [2]. It is a huge number and unfortunate. It's not the end. About eight percent of world workers live on only about 1.9\$ per day. It's horrible and a very hurtful truth. It's not all, in every 5 seconds there is dying one child under the age of 15 because of poverty [3]. That means if you read this paper from the beginning already 17 children are dead and just now another child is going to be. Like this, many more bad truths are lying around us. But this can be minimized and might be solved very easily. It is not hard to reduce this global problem locally or personally. Yes, we can solve this problem just by taking a step from our side alone.

Though poverty is not at an extreme level in all countries. In Europe and North America, Australia there are fewer percentages of 10% of poverty affected people. As a result, South East Asia and South America region have much higher poverty rates than the 10% we found from data. So it is easy to say that countries like Bangladesh, Indonesia, Africa, India, Zimbabwe, Ghana, Chad, Ethiopia, Afghanistan, and Myanmar are more likely to suffer from it. From the graph, we can see the lowest 20 GDP countries.

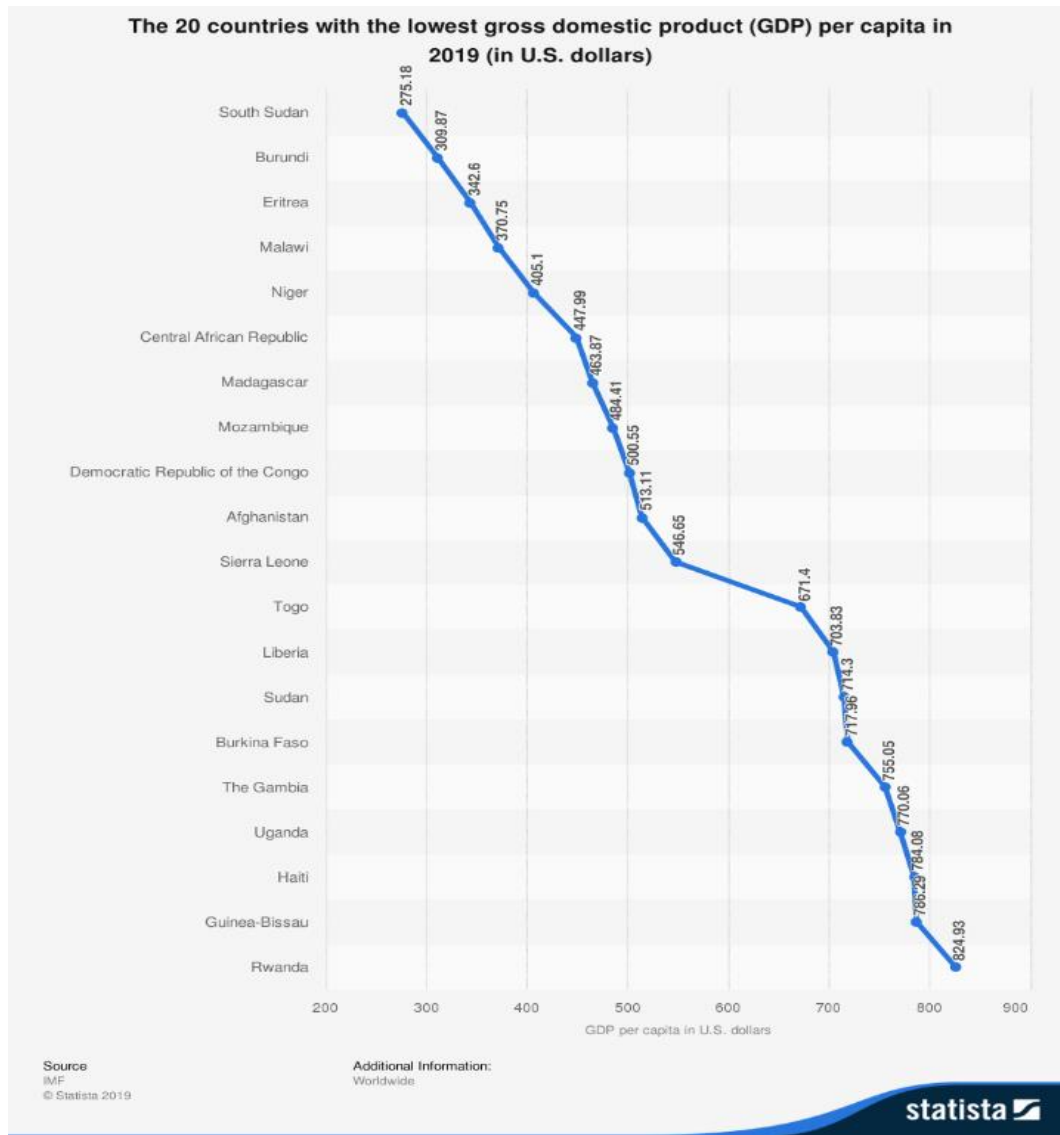


Figure: 1 lowest gross domestic product

Source: Statista

In the graph, we can see how miserable and hard life is becoming for them to live for some of the people of these countries as we all know GDP is just an average.

Though some countries are improving financially and reducing the poverty rate, it is still very slow. It can be faster if we only not depend on the government but if we also come forward to help.

### **1.1. What is (BEUMAN) Pranabandhu?**

(BEUMAN) Pranabandhu is a platform where people will be able to help other people by seeing them directly, donating money in our fund, and by sending help to us for bringing these products to the people who want help.

There is always a distance between the people who need help and the person who wants to help. Our main purpose is to minimize that distance and make it easier for them to reach out at the help seeker's end. To achieve this we come out with some great ideas which we will describe throughout our further report. Among those ideas, we tried to implement some of these in our project and we are looking forward to adding others later. But all ideas and strategies have a single goal which is making life more beautiful and easy for those neglected and poor people.

It's a system so it has its common problems. As we are focused to work with the people of both sides so we faced many problems from the beginning and to the end of the project. When we are dealing with unknown people there comes different conflicts and issues. Solving issues and making it right we all did in our whole project because when we try to do something we have to start from the beginning. Problem-solving is the only way and we will discuss every possible issue and solution we took in this report.

As we focused to achieve an environment system where people of two sides can interact and help each other. Besides we also want to make it safe and easier for helping hands to come here and donate, help, and make a good community.

Keywords: social help, donation, rural help, poverty

## **Motivation**

A few weeks earlier I was walking through a field and I saw a family there. There were two beautiful children and a mother. That two children were looking like they had left with their skeleton under the skin. Their mother maybe was in much severe condition than her child's but still hardly awake and raised his hand for some food and wanted some clothes for her child to cover them but nothing more. But unfortunately, I was watching them like a shameless tree because I had only a few amounts of money which I will need as a transport charge and that money was too less for them to get fed properly. I did nothing there but I promised I will do something for people like them. Then when I was on the way home I found that I reached them but couldn't help them because I didn't have enough resources. But there must be someone who wants to help but they cannot reach them. Yes this line "there must be someone who wants to help but they cannot reach them" and that family is the motivation of our project.

We are all mortals so we should utilize our lives by doing well. Sometimes it becomes hard to help others because of the medium, way, and distance. Our main purpose is to remove it from that barrier and make helping possible. If everyone even can donate 1taka per day it will be 7billion. So if we all come forward nothing will be impossible, hard, and unachievable.

## **Objectives**

- i. Creating a platform for people who want to help others can help them in a secure and easy way.
- ii. Make donation in different criteria much easier, secure and make it without needing a middle man.
- iii. Make it easier for organizations and groups to receive donations and goods without going door to door.

- iv. Make less waste. By using our application anyone will be able to send extra goods/foods and we will donate them to the people who cannot get their meal.
- v. Making an easy UX for all kinds of users. 6. Make donation without donating something but by just adding a post which will take a min

## **1.2. Expected Outcome**

- i. Reduce the suffering level of our surrounding poor people of a society.
- ii. Increased helping influence among the people.
- iii. Sharing without the expectation of return.
- iv. Reduced sickness and death ratio of people who live below the poverty line.
- v. More organization willing to help more people.
- vi. Reduced people who do begging in the street.
- vii. There will be data of those helpless people in the database we are thinking it will help the government to build some place for their habitation.

## CHAPTER 2

### BACKGROUND

#### **Introduction**

Our project name is "BEUMAN". Which is an android platform where people will be able to help others by just one click. Here anyone will be able to use any kind of people like individuals and groups by using our app. Here we made several ways of helping like project help, direct help, and event help and so on. So that everyone can use our application to help people.

#### **2.1. Related Work**

When we started this project, the goal was to dig deep to find research works on this topic. But there is no such an approach were implemented the use of social platforms to reduce poverty and minimize it. But some papers on poverty, childhood poverty, and food wasting were really helpful. That really helped to solve this problem more meaningfully.

Greg Duncan (1997) states that family income and poor family condition directly affects the childhood and the outcome of the child. Family income largely influences children's ability and achievements in their future [7]. He also said that children who live below the extreme poverty line might not be able to succeed in their life and it might lead them to uncompleted study and dropouts. Because of low income their health nutrition also greatly affects their lifetime significantly.

Our project name is "BEUMAN". Which is an android platform where people will be able to help others by just one click. Here anyone will be able to use any kind of people like individuals and groups by using our app. Here we made several ways of helping like project help, direct help, and event help and so on. So that everyone can use our application to help people.

## **2.2. Challenge**

From the beginning to end there were some challenges we faced we tried to solve. First of all find common problems like how the post will work, how users can stay secure etc. We made a survey on users also with the people of these platform victims. We found that it will be easier to make a time variable posting system. There are also some common challenges we found like

1. **Finding all the steps to creating a fluid platform:** Users are the main asset of this platform. So that ensuring a fluid and fast platform was our main goal from the beginning.
2. **Making a modern but simple interface:** As our platform is created for kinds of users. We tried to make a UI where the user will get maximum UX from less effort of using. If the user has to give the effort to use our platform there will be no better user experience.
3. **Finding the right category of user:** Our platform has two kinds of users. One is a direct user and one indirect user. We both focused on the direct user and indirect users to make sure our platform will achieve the goal they wanted.
4. **Making a secure user authentication system:** User is our asset. We cannot let any user feel insecure. So we went for Firebase for the authentication system. Because firebase auth is the most secure authorization system because it is get controlled and managed by Google.
5. **Secure database:** Finding a secure database was a big challenge. As we cannot afford our personal host and server now. We had to find a proper solution for this. Where the user will able to store and use their given data with the most security. Without keeping their data secure our platform will have no value.
6. **Increasing accessibility:** Finally creating a platform that can be accessed and used by everyone was a big challenge for us. Because we had to design our whole platform in a way that can be used by everyone with any kind of device. So we drive deep to find support managers for making it accessible.



7. **Less effort and best UX:** Our main and only goal behind the design was making a platform where the user has to give minimal effort and will receive maximum UX. Our every page/activity is designed in a way so that user will be able to use it without any effort and they will get maximum usability from it.

## CHAPTER 3

### FEATURES AND SOLUTION

#### Introduction

In this section, we will talk about the problems, features, and solutions about our platform. We will also know how we have dealt with the problems and how we found the solutions from the survey and research by doing research on this topic.

#### **3.1. Expected Scenario and solutions**

As we all know our platform is for helping people and groups, organizations. So our first task was finding the exact scenarios of problems and help needed situations and we tried to implement them in our app. They are given below.

**3.1.1. Finding the right person:** It was a great challenge for us to make a way to find the right one. Because no one will know who needs help in the street or anywhere. But our project is not only for them because if anyone suffers so much that he needs help anyone can notice he will be able to make a post about him in our application and anyone can notice him who wants to help and have the material to donate he will be able to send the help. Then we realized it's not very common because in ten only for two it will happen. So we found some new ways to help them. We are representing some data below. Where we classified in two groups women and men gender and given about their data we collected from our survey (data are taken from 80+).

. Table: 1 Basic information and reason of begging

	Facts	Men	Women
Reason of begging	Age	47%	60%
	disability	40%	30%
Permanent address	Yes	~90%	~90%
	No	~10%	~10%
Personal phone	yes	~90%	~80%
	No	~10%	~20%

From our findings we started to find some new ways to send help to them we found some of them are listed. From our flowchart(Figure 2) it will be much clearer.

**3.1.2. Direct help:** Direct help means when someone sees a victim he can directly post on our app so anyone can help him nearby by giving them what they have at their hand in that time period. Suppose a person walking in the street in winter and found a person wanting help or just suffering from so much cold and he doesn't have the help so he will just be able to create a post about him in our application giving his name, current address and permanent address and the thing he needed. Then anyone in that area will send him the help by reaching himself. Here we encountered some problems like security and availability.

**3.1.3. Permanent address:** If the person doesn't have a permanent address it will be very hard to find him later after going to that place with the help. So we decided we will keep the post for 2hour if he/she doesn't have any permanent address and if it has a permanent address it will be kept for 24hour.

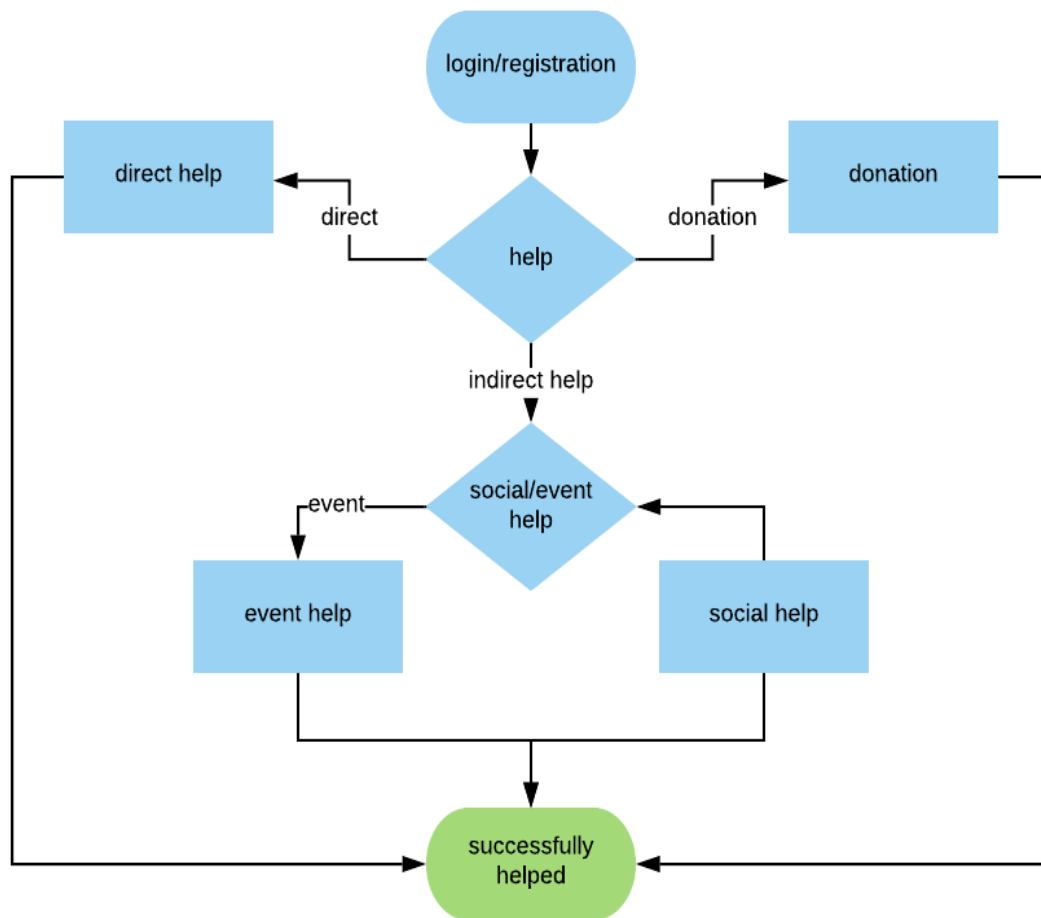


Figure 2: Flowchart

**3.1.4. Fraud:** It will be very easy for someone to get fraud or cheated by dealing money. So there will be no direct money handling or money help considered. All help has to be done with stuff that they really need like cloth, medicine, foods. If the wanted size is too much like five or more clothes, thousands worth of medicine etc. we will first confirm that and then will approve the post. The user who gave a fraud post will be banned.

3.1.5. **Reaching problem:** Some people won't be able to reach the victim to give help because sometimes it is not possible. So there is an option for them to send help. They can post their help there, our volunteers will reach them to take these things and we will make sure their donation will be donated to the right person at any cost. Suppose in a ceremony there are left over 20-30 people. So if the ceremony arranger posts that they have food for 20-30 people our volunteer will receive and deliver to the starved people.

3.1.6. **Money donation:** As some people will always want to donate money. But we cannot make money transactions with direct help. So we will make a BEUMAN fund sector. Where they will be able donate money and we will receive that money and help poor people with that money. There are some people who will want to help a single category of people like disable, women or autism maybe for child education. So there will be an option when they donate money for selecting a category. After we receive their donation we will keep that in mind and will use that money to help that kind of person. After helping them we will send notification that their purpose of donation has been served.

3.1.7. **Database:** As we help unknown people it will be tough for us to find people when we will help from our side collecting money from the BEUMAN fund. So we will save every data of the people who ever get posted. We will save their data with their need and permanent address and phone number (if have). So when someone donate us and say us to help a type of category of people we will be able to find them from our database and help them out.

### **3.2. Work Flow**

From the beginning, we have started to think about how we will start the work and how we can end it successfully. So, first of all, we had to understand the whole problem and we studied it. After finding all the problems there we started to solve the problems. When we started to solve the problem we faced a lot of problems sometimes it took a month to solve one. After solving the problem we decided to select a platform to work with. As in a short period, we cannot make this platform for every kind of device. So we decided to go with native android devices. Then we went for the survey used to understand which kinds of UI and UX they need and they want. From the user feedback. Then we tested the design. After testing the design we again concern the user for feedback. From their feedback we have redesigned the whole system, again and again, we finally found the final design. Still, now we are changing the design to make it up to date enough. As we are using android, we have to always keep up to date with their new versions. Because our main target is all users. So every user might use different devices with different versions of android. We are happy to say our application is adapted in all kinds of devices from the kitkat version of mobile.

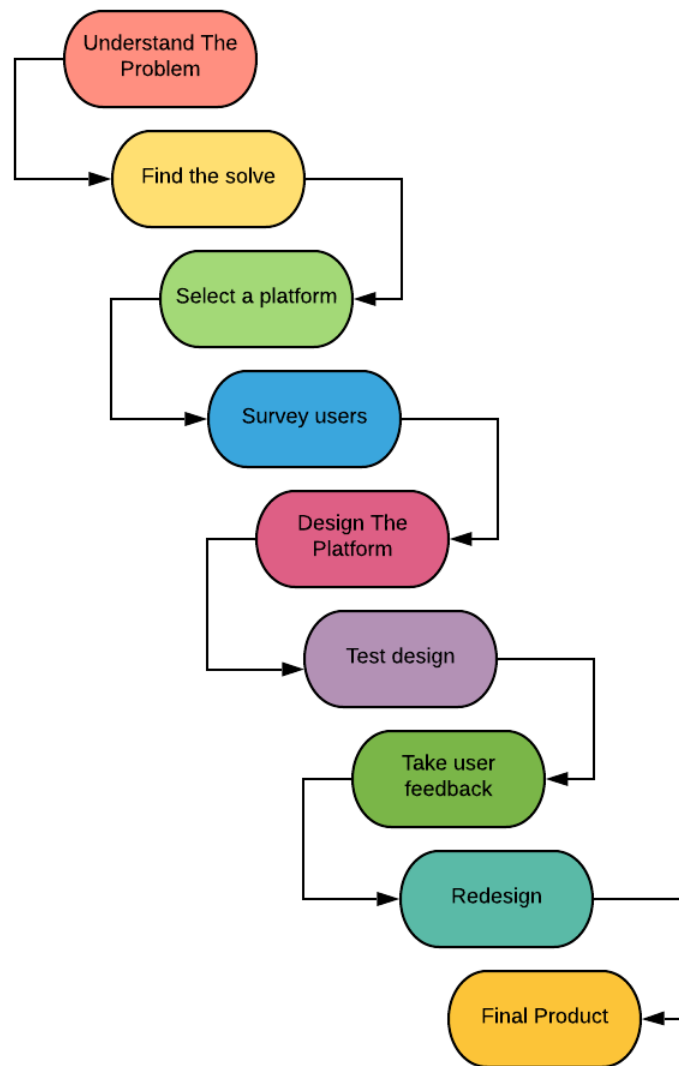


Figure 3: Work Flow

In above figure we have described our work flow with the help of a diagram. By which we can see the working steps of our project.

### **3.3. Platform (Android Native)**

As it is an online platform the best way of reaching many people is using a mobile platform. Why we should use the mobile platform and why not let's talk about these

Table 2: Mobile vs. Desktop and Android vs. iOS users

Total User	43	57
Platform	Desktop	Mobile+Tablet
Total User	71%	29%
Platform	Android	iOS

From table 2.1 we can object that about 57% of internet users use the internet from mobile. So it is clear the best way to dive into them is by using a mobile platform. Again from table 2.2, we can see that from them about 71% of users use android and 29% iOS. So the best way of engaging people in this platform will be mobile platform.



## CHAPTER 4

### DESIGN REQUIREMENTS

#### Introduction

In this chapter we will discuss about design requirements. We will go through our back end design requirements and frontend design requirements. In this chapter there will be a brief about our user interface design and user experience design. How we designed it and how we have implemented it.

#### 4.1. Design requirements

As our users are generally people who will operate the application our design requirements mainly depend on them. But we also looked out about people for whom the application made. The people who will need help. Our final design requirements are,

- ❖ **Simple user interface:** To make best out of every application we should make applications easier to use and understand. So besides requirement, the main goal was make the interface easy to use and fast, fluent. Color choosing, style choosing all choose from the user perspective.
- ❖ **Secure database:** The database is one of the most important things for any kind of social or online platform. Because it collects users' data which should always be kept safe. But if the database is not safe enough it can be easily stolen or misused by others. So we decided to go with the Firebase database. Which is powered by google and much secure than any other database as it is stored in Google's own server? So our focus was using a firebase cloud and real-time database for our application.

- ❖ **Secure and simple registration and login system:** Login/Registration can be always a pain for users and for the management to manage it. It is hard to protect too if there is not enough security. But it should follow a simple manner too. If registration/sign in is becoming too complex then users don't want to use that system much often as they feel lazy when they have to sign in/registration in a hard system. So we focused on a simple and secure registration and login system using firebaseAuth. We used a two-step and verification system for both registration and signing in.
- ❖ **Less type and fast response capability:** As every system consists of several functions but we should make sure when designing a system that users should be able to do much without doing much. So our main purpose was making sure that users need to give fewer input data. Sometimes it also forces users to give wrong data because of typing mistakes. So our platform collects all given data and reuses them for all other in-app purposes like posting, donating, etc. We also used a checkbox to make users type less.
- ❖ **Bangla user interface for all kinds of users:** As this platform is developed for all kinds of users. It's not mandatory they all know English. So we decided to make this platform in Bangla so that all kinds of users can understand and use this properly. We implemented our whole system in pure and simplistic Bangla.
- ❖ **Informative interface:** Interface means the user playable and interactive area of the application. Application needs to speak with the user because it is always a great thing for the end user if he can see much data in one activity. We tried to contain all necessary data of a function of our platform in just one activity so that users will not need to move in different places for doing things. Our main page is designed in a way so that users will be able to see every possible way even if they can report from just one place. Which will help users to use our platform more thoroughly and easily.

- ❖ **Less activity for ensuring fast execution of tasks:** For one end point there should be less activity. So we made only one click operation for each procedure so that the user would be able to do it easily. As if there is much click needed for the user it will cause confusion and laziness for them. So one click for each kind of procedure will help them from not facing these kinds of problems.
- ❖ **Light and fast application:** Last of all the platform should not be heavy for the user either for the phone. So our application is just 6mb which is very lightweight. As this application is made for all kinds of users so their phone necessarily does not need to be the latest or good. We care about that. We know all people do not have the latest phone. So our application is very lightweight and simple so that every person can use this in all kinds of devices. Though it is light we used the best and latest libraries available on the internet with support managers so that every end-user gets the latest and best experience possible.

## **4.2. Front-End Design**

Our whole application was designed by XML in Android Studio. We also worked with React Native but we thought that it would be nice to work with default android IDE for getting fluent support and a workplace. We are looking forward to converting it into a native application using React Native. We used very few colors and simple User Interface for all categories of people. We tried to consist of our activities as few as we can for a better-using experience. Our code has been written in Java so that it will run 1.5X faster in android devices and will be compatible with all devices. Our goal is to make it simpler day by day. For our interface library, we used the latest AndroidX library with lots of tunes. For further cleanness, we used some custom libraries too. Like for toasts we used a clean and simple library similar for gliding and images.

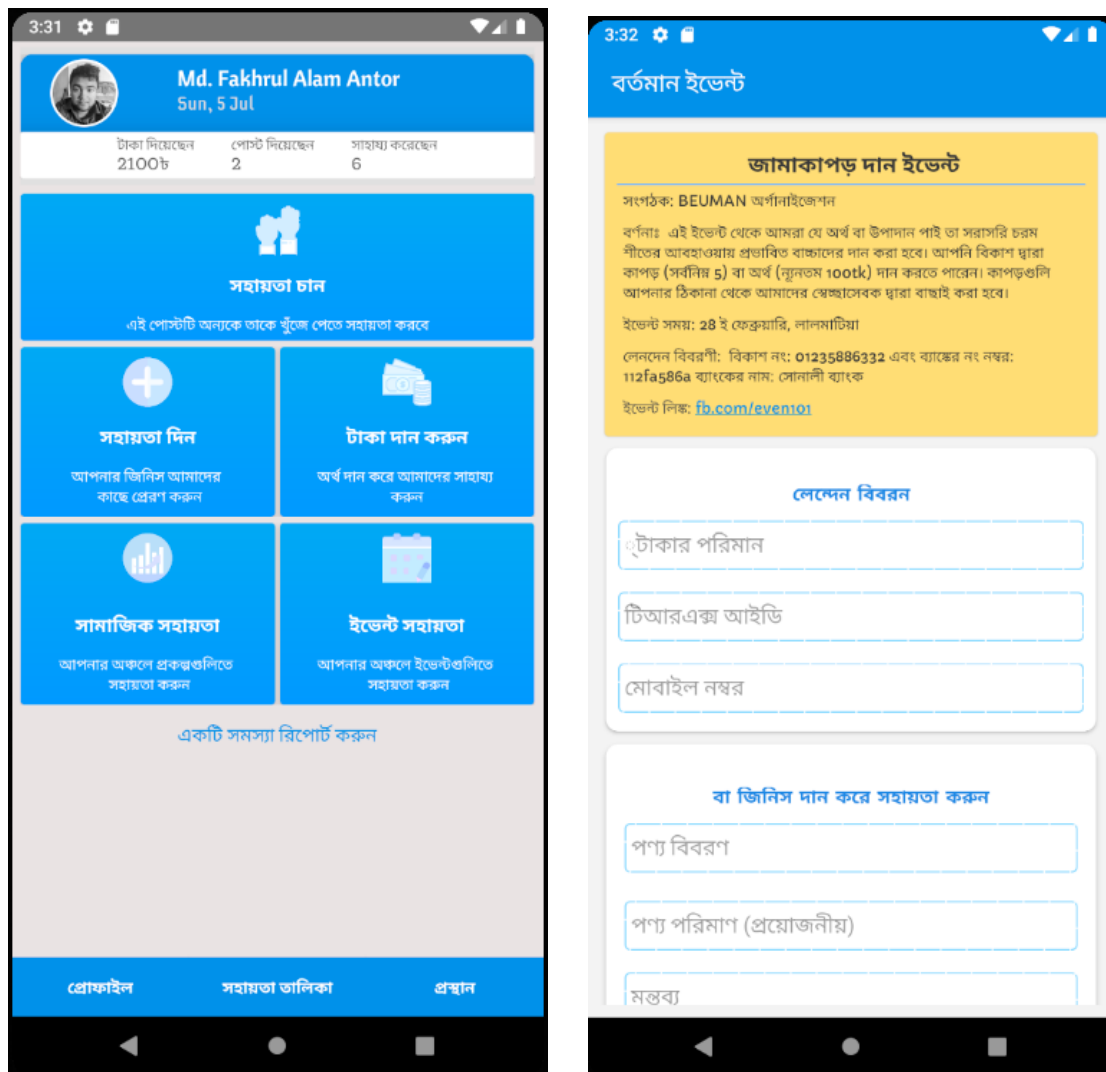


Figure 4 & 5: User Home and Event help

In figure 4 we showed how our “Main Menu” looks is. In figure 2 we showed how our “Event help” menu looks. From above picture we tried to define that our application is simple and users will be able to use it effortlessly. As all the data is showing in one activity, user won’t need to search and find anything outside of it. Thus it will save lots of user time and it will help users to use it easily.

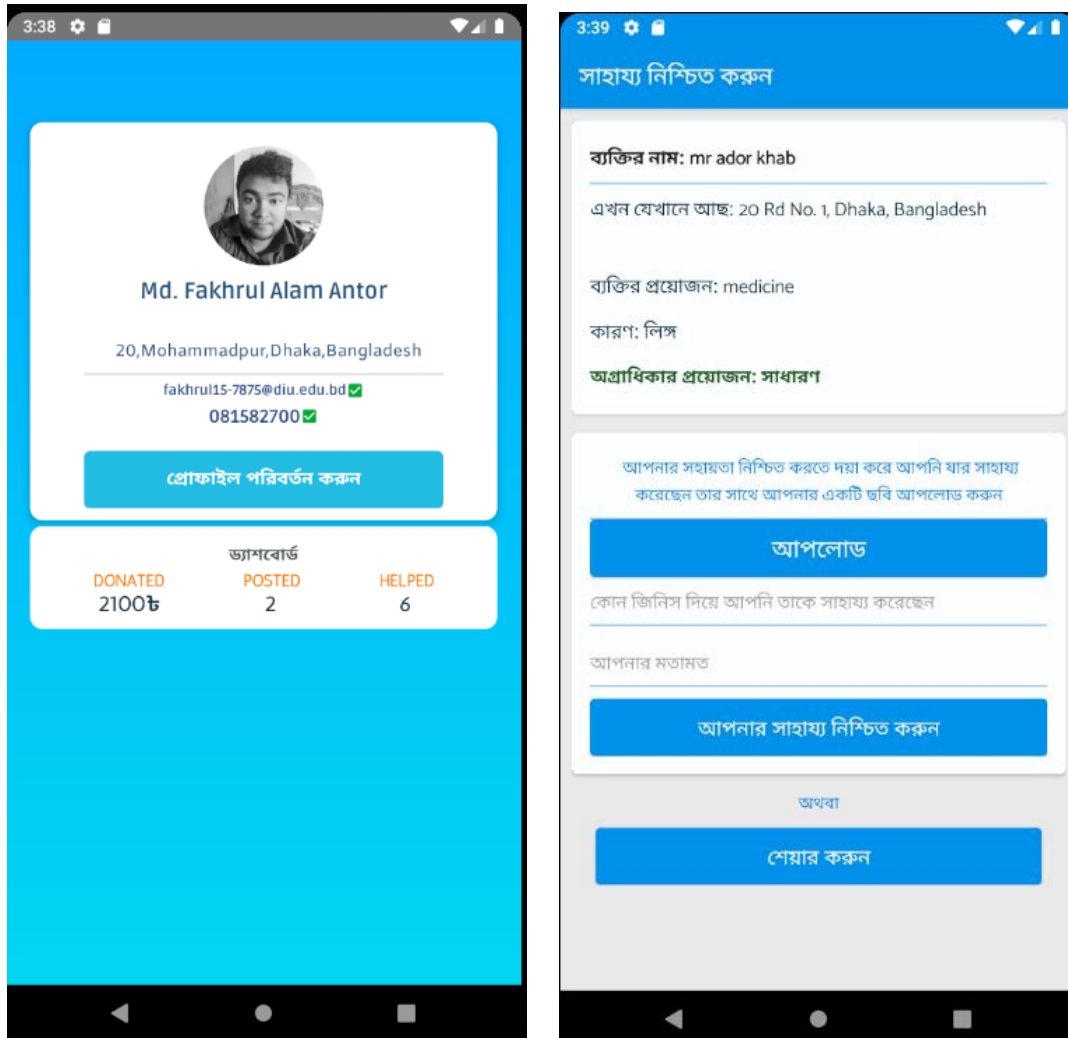


Figure 6 & 7: User profile and Direct help

### 4.3. Backend Design

Our backend is completely coded with Java and our database side is built on Firebase. As we all know the most secure database for application is firebase. We used FirebaseAuth for our authentication system. For the storage part, we used Firebase Storage and for the database, we used Firebase real-time and cloud database. The reason behind choosing,

- I. Secure: Firebase is the most secure database available on the internet as it is controlled by Google itself and the server also maintained by them.

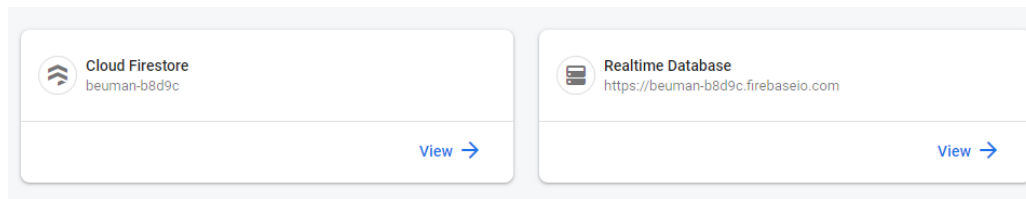


Fig 8: Databases

- II. Fast and fluent: As the server and scripts are maintained by Google on the go it is most fast and fluent possible. There is nearly zero chance of server failure and data loss.
- III. Easy to control: Besides being controlled by Google it is also developed by them. So it is very easy for end users to use. It is also easier for us to use as the API for it is very easy to use and there are many functionality which can be easily adopted in application.
- IV. Built in Auth: Another reason for choosing this is the built in authentication system by which we can easily make authentication systems. There are also so many ways of doing this and it is secure with two step verification and highest possible encryption. Thus make user data safe and viable.

```
mAuth.createUserWithEmailAndPassword(email, password)
    .addOnCompleteListener(this, new OnCompleteListener<AuthResult>() {
        @Override
        public void onComplete(@NonNull Task<AuthResult> task) {
            if (task.isSuccessful()) {
                // Sign in success, update UI with the signed-in user's information
                Log.d(TAG, "createUserWithEmail:success");
                FirebaseUser user = mAuth.getCurrentUser();
                updateUser(user);
            } else {
                // If sign in fails, display a message to the user.
                Log.w(TAG, "createUserWithEmail:failure", task.getException());
                Toast.makeText(EmailPasswordActivity.this, "Authentication failed.",
                    Toast.LENGTH_SHORT).show();
                updateUser(null);
            }
        }
    });
```

Fig 9: Registration code snap

- V. MLKit: In future we have lots to do with AI. As they are built in MLkit by using we can easily implement AI stuff in our platform it was literally a game changer for us. MLk will bring everything together as easily as we know Tensor flow, keras are quite complex in this kind of development. Processing data, predicting all will be easier because of it.

#### **4.4. Interaction Design and UX**

To make the design the interaction and UX we have to dive deep and consult with all categories of users. Our main goal was to find the errors and flaws of our user experience. We have committed more than 50 changes through the development to obtain the best possible user experience including color and language. Our main goal was,

- I. Fluent and fast user experience so that anyone can interact with the application from any region and with any device
- II. A language that can be understood by all kinds of user, we decided to go with Bangla
- III. Celerity so that from each angle and in every condition user will able to see the interface and understand
- IV. iv). Crash problem. So that all users will be able to run the application in a cashless environment.
- V. Fluent network experience. We took steps in order to confirm the stability of our application in all kinds of internet connection
- VI. Information on all pages so that users will not need to go to the FAQ section always when they need to learn about that stuff.

## CHAPTER 5

### IMPLEMENTATION AND TESTING

#### **Introduction**

In this section we will discuss about implementation and testing of our application. After developing the application(platfor) we have faced lots of user experience problems and we have solved it. Here you will know how we implemented our database, front-end and test implementation.

In test implementation we will know how we tested our application via user and backend.

#### **5.1. Implementation of Database**

Our need was a database where we can store real-time data and in a cloud database for processing data and for verification. So we choose a firebase database created by google.

Our database was created in simple format to access data for different procedures. We used both a real-time and cloud database for our application.

As we already know there are some other databases too. But to use these database and making them secure will take lots of time and money for developing a project, so choosing firebase as backend database was a great idea. Because in firebase everything is done by google. It is fast and it will have to interruption. Firebase also support scripting and query so that our user experience can be enhanced by using these features. Indeed it is not our last version and we are working on the updates for the future our goal is improving its features daily. Which can be done easily with firebase. So that we used real-time database for fast updates and cloud database for query data's. Which can be easily performed later using firebase script.



### bug reports

- NEdi83Di1GUdDhKfTiZEBaxpyCm2
  - description:
  - id:
  - problem:
- dGNINEuyU0gmUWWPQahthNdClxf1

### posts

- dGNINEuyU0gmUWWPQahthNdClxf1
  - address:
  - age:
  - name:
  - needs:
  - phone:
  - time:
  - type:
  - userid:

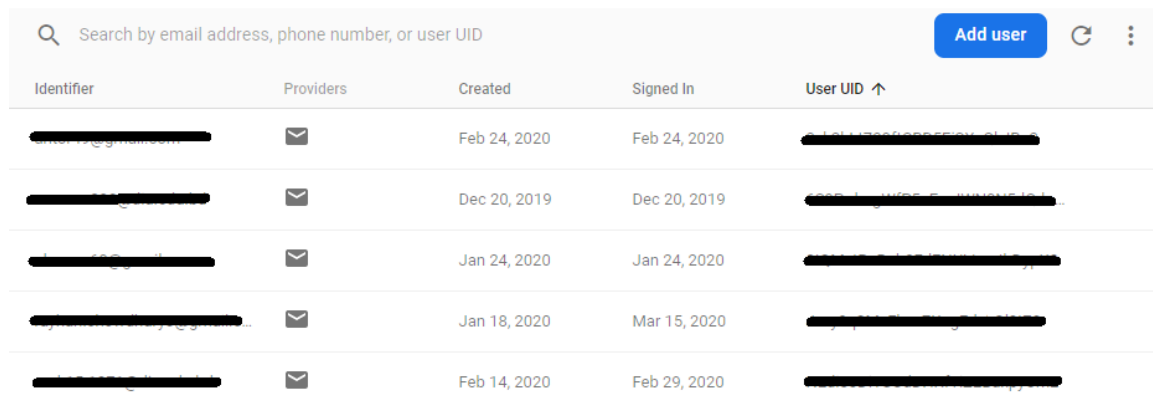
Figure 10: Real-time database firebase

+ Start collection	+ Add document	+ Start collection
Donations >	30PhXLxaCqS2aMEDauRU	+ Add field
Event Donation	GZYEhfp0LJrhCejd9pU2	TRX ID: "tsgghis16536"
Event Money Donation	GfhXBZ1QRGZ6ajTfuQym	amount: "10"
Help_posts	HgDuyXZiW1BGLm1DZcUB	number: "01770711779"
Public Donations	LRKiF8iwPeRRrivCftJD	userid: "fvTFtsS0EcZ6zFbyulFWiWQWSTk2"
Users	MGMsBTprnTcCBE53C1jU	
data	RV0NeYfT8itVFVoGgkeV	
postimage	Zh4GzjzbSkaAHf0SyWo0 >	
	jkYyZC9jUfMBGISQNseG	
	nXMokcrHn3wUljh6dIfP	
	ocr1uYq9E5pGWaFliFJI	

Figure 11: Cloud Firestore Database

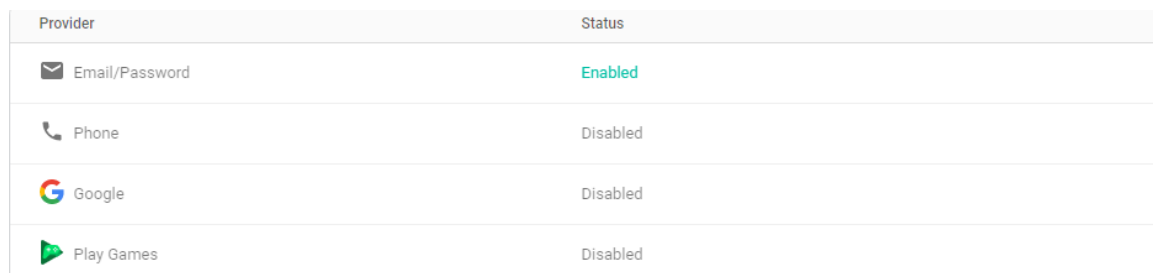
In figure 10 we can see our real-time database implementation and in fig 11 the cloud database implementation.

In login system we used firebaseAuth email authentication with two step verification system. Which is very safe and easy for the users to get registered.



Identifier	Providers	Created	Signed In	User UID ↑
[redacted]	✉	Feb 24, 2020	Feb 24, 2020	[redacted]
[redacted]	✉	Dec 20, 2019	Dec 20, 2019	[redacted]
[redacted]	✉	Jan 24, 2020	Jan 24, 2020	[redacted]
[redacted]	✉	Jan 18, 2020	Mar 15, 2020	[redacted]
[redacted]	✉	Feb 14, 2020	Feb 29, 2020	[redacted]

Figure 12: FirebaseAuth Registration system



Provider	Status
✉ Email/Password	Enabled
☎ Phone	Disabled
🌐 Google	Disabled
🎮 Play Games	Disabled

Figure 13: FirebaseAuth Authentication

In these figures we can see how flexible firebaseAuth is. We can see there are many ways of authentication and registration with a secure layer of encryption. All the password is protected from admins and even from the backend scripts so that it will be near impossible to crack the password of users.

## 5.2. Implementation of Front-end Design

Our front end design has been implemented using XML and Java. To make a fluent interface we have introduced java in transitions and activity. We used XML to design the interface. XML is an Extensible Markup Language that has a set of simple rules and ways of designing user interfaces. By using this we can design any kind of interactive user interface. To make the designed user interface interactive we have used java in the backend.

```
Intent intent = getIntent();
String name = intent.getStringExtra( name: "NAME");
String need = intent.getStringExtra( name: "NEEDS");
String address = intent.getStringExtra( name: "ADDRESS");
String age = intent.getStringExtra( name: "AGE");
String sit = intent.getStringExtra( name: "SIT");
help_name.setText("ব্যক্তির নাম: "+name);
help_address.setText("এখন যেখানে আছি: "+address);
help_needs.setText("ব্যক্তির প্রয়োজন: "+need);
help_age.setText("কারণ: "+age);
help_situation.setText("অগ্রাধিকার প্রয়োজন: "+sit);
String nor="সাধারণ";
```

Fig 14: Making Interactive using JAVA

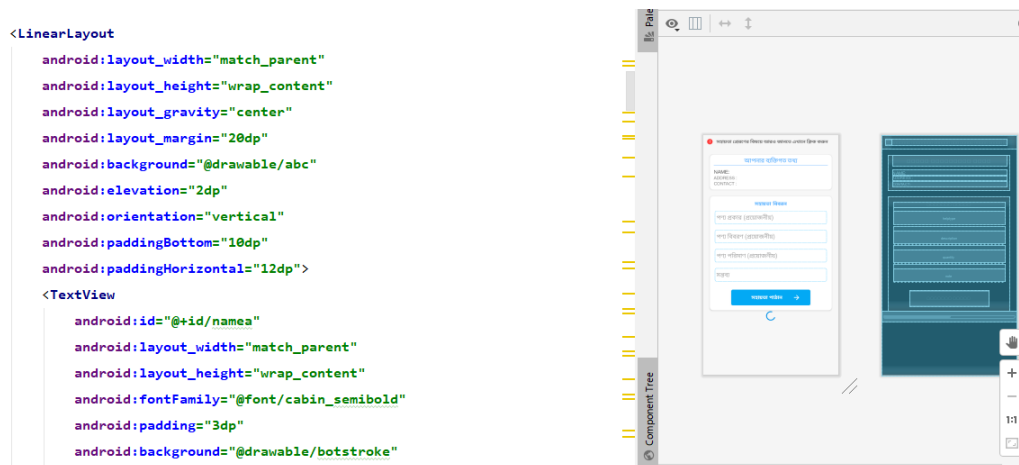


Figure 15: XML to design

In figure 14 we can see we have made the user interface interactive by using java. Where we implemented Bangla version of application. In figure 15 we have showed a basic code for designing the donation activity. Where we used basic XML and advance XML for designing.

### **5.3. Testing Implementation**

For testing, we implemented both side tests, one for the user interface and another one for the server. To see problems on both the front end and back end we have run tests for two sets of users. By one set we verified our database and one set we verified our UI/UX and functions of our system. So we implemented our testing in these two special ways. Described below,

- ❖ **Database via Data Entry:** When users register in our system and start using it they have to enter data in order to use. We asked all volunteers who helped us to test to use all the functions of our system. As a result we can get sure about the backend if they successfully can enter data. Suppose we have a help sending option where users will be able to send money. By giving their number, transition details they can do that. If they successfully can make that post it means our backend is up and running perfectly.
- ❖ **UX/UI:** When they start to use our application for some time they might find some stability issues. So we gave a feedback option in the app. As a result users will be able to give their valuable feedback through this system. We successfully collected these data if anything is wrong then we come to fix these. Suppose if it has a crash issue users will be able to give feedback and they will ask us to remove that issue on that activity. Then we start to work out that problem and fix that.

By implementing these test processes we successfully got some very good results and successfully ran our application through different classes of users.

## **5.4 Test Results and Reports**

This test is conducted on about 45 people. Another test was conducted many before this to make sure our application is okay. After conducting that we have faced some error which is fixed by now and after this test we are very happy to say that our application is ready to use.

Table: 3 Final implementation and test result

<b>Factor Name</b>	<b>Pass</b>	<b>Fail</b>
Crash	37	4(1 activity, 2 post,1 startup)
Understanding UI/UX	38	3(1 font issue, 1 Button Issue,1 Info issue)
Posting	32	3(2 crashes when posting, 1 got error)
Registration/Login	41	0
Setting up profile	36	2(1 permission problem, 1 crashed)
Security concern	39	0
Bangla UI/UX	40	0
Spelling and grammar	38	3(2 spell, 1 incomplete sentence)

From table 3 it is confirmed that the error rate is very low. There are really no fault available which can cause user bad experience.

## CHAPTER 6

### CONCLUSION AND FUTURE SCOPE

#### **Indroduction**

In this chapted we will end our report by discussing about our project conclusion and scope for further studies. We will talk about future developments and improvements and conclusions about our platform.

#### **6.1. Discussion and Conclusion**

The system we have created is very easy to use and fulfills the main purpose. The main purpose was to help people with this help in a secure way. We created several systems of donation and helping so that anyone can help any kind of person, group, and organization, or even in any social project. So we have created an option called public help where people will be able to help a project like “Local Atim khana”,” Local School Project”, “Local Masjid Project” easily with one click. With our event option, anyone will be able to donate in any kind of event such as “FREE CLOTH DONATION”, “BOOK DONATION” and others. We added these with our main concept because we thought just helping in one way does not matter much. Because in our society there are lots of problems which can be solved by one app. So we did it and we are happy with our result. In the future, we are going to implement lots of other features like cyclic help, student fund, and blockchain concept to improve the transaction system.

In conclusion, our application will play an important role in the field to help social help and donations. Before which cannot be done due to security and reaching issues now all will be gone. Reaching to someone with help made easy by our app and helping in a big event or project now also possible. The world is so small and limited. So if we just spread happiness what we have extra will make this world beautiful and happy. If our platform can help that it will be a great achievement for us.

## **6.2. Scope for Further Developments**

Though we have created a multipurpose and functional android application still there is still lots of scope of improvement. Our main goal is to improve it by making it a native/hybrid application. Make a proper backend application section for accessing data more easily by admins. We will add an online automatic transaction system such as Bkash gateway and MasterCard. Then our target will be using an Artificial Intelligent Deep learning-based image processing system for adding posts or users to make it more transparent and easy. Another system called student fund which will be implemented in our system where people will be able to help students by donating money regularly in cyclic order. We are also looking to add a digital card system where we can easily add new people by giving them a digital card and scanning them anyone can post them without any typing. Finally, we will try to add a blockchain concept in user verification and transaction system to help it make a more secure and trusty platform.

## **6.3. Recommendations**

Our recommendations are for future development and improvement are,

- I. Creating an iOS native application using swift and XCode.
- II. Using own private database and hosting
- III. Using encryption in data entry
- IV. Using block chain in payment and posting
- V. Using facial detection in image entries
- VI. Creating a web platform
- VII. Adding QR code system for registering in application

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## **APPENDIX**

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